Amendments to the Specification

Please replace paragraph [0018] beginning on page 6, line 4 with the following amended paragraph:

Transgenic mice (not pigs) have historically been the preferred model to study the effects of genetic modifications on mammalian physiology, for a number of reasons, not the least of which is that mouse embryonic stem cells have been available while porcine embryonic stem cells have not been available. Mice are ideal animals for basic research applications because they are relatively easy to handle, they reproduce rapidly, and they can be genetically manipulated at the molecular level. Scientists use the mouse models to study the molecular pathologies of a variety of genetically based diseases, from colon cancer to mental retardation. Thousands of genetically modified mice have been created to date. A "Mouse Knockout and Mutation Database" has been created by BioMedNet to provide a comprehensive database of phenotypic and genotypic information on mouse knockouts and classical mutations (~~http://research.bmn.com/mkmd;~~ Brandon et al Current Biology 5[7]:758-765(1995); ; Brandon et al Current Biology 5[8]:873-881(1995)), this database provides information on over 3,000 unique genes, which have been targeted in the mouse genome to date.

Please replace paragraph [0019] beginning on page 6, line 20 with the following amended paragraph:

Based on this extensive experience with mice, it has been learned that transgenic technology has some significant limitations. Because of developmental defects, many genetically modified mice, especially null mice created by gene knock out technology die as embryos before the researcher has a chance to use the model for experimentation. Even if the mice survive, they can develop significantly altered phenotypes, which can render them severely disabled, deformed or debilitated (Pray, Leslie, The Scientist 16 [13]: 34 (2002); Smith, The Scientist 14[15]:32, (2000); Brandon et al Current Biology 5[6]:625-634(1995); Brandon et al Current Biology 5[7]:758-765(1995); Brandon et al Current Biology 5[8]:873-881(1995); ~~http://research.bmn.com/mkmd~~). Further, it has been learned that it is not possible to predict whether or not a given gene plays a critical role in the development of the organism, and, thus, whether elimination of the gene will result in a lethal or altered phenotype, until the knockout has been successfully created and viable offspring are produced.

Please replace paragraph [0086] beginning on page 26, line 24 with the following amended paragraph:

The present invention further includes recombinant constructs containing sequences of the alpha-1,3-GT gene. The constructs comprise a vector, such as a plasmid or viral vector, into which a sequence of the invention has been inserted, in a forward or reverse orientation. The construct can also include regulatory sequences, including, for example, a promoter, operably linked to the sequence. Large numbers of suitable vectors and promoters are known to those of skill in the art, and are commercially available. The following vectors are provided by way of example. Bacterial: pBs, pQE-9 (Qiagen), phagescript, PsiX174, pBluescript SK, pBsKS, pNH8a, pNH16a, pNH18a, pNH46a (Stratagene); pTrc99A, pKK223-3, pKK233-3, pDR540, pRIT5 (Pharmacia). Eukaryotic: pWLneo, pSv2cat, pOG44, pXT1, pSG (Stratagene) pSVK3, pBPv, pMSG, pSVL (Pharmiacia), viral origin vectors (M13 vectors, bacterial phage 1 vectors, adenovirus vectors, and retrovirus vectors), high, low and adjustable copy number vectors, vectors which have compatible replicons for use in combination in a single host (pACYC184 and pBR322) and eukaryotic episomal replication vectors (pCDM8). Other vectors include prokaryotic expression vectors such as pcDNA II, pSL301, pSE280, pSE380, pSE420, pTrcHisA, B, and C, pRSET A, B, and C (Invitrogen, Corp.), pGEMEX-1, and pGEMEX-2 (Promega, Inc.), the pET vectors (Novagen, Inc.), pTrc99A, pKK223-3, the pGEX vectors, pEZZ18, pRIT2T, and pMC1871 (Pharmacia, Inc.), pKK233-2 and pKK388-1 (Clontech, Inc.), and pProEx-HT (Invitrogen, Corp.) and variants and derivatives thereof. Other vectors include eukaryotic expression vectors such as pFastBac, pFastBacHT, pFastBacDUAL, pSFV, and pTet-Splice (Invitrogen), pEUK-C1, pPUR, pMAM, pMAMneo, pBI101, pBI121, pDR2, pCMVEBNA, and pYACneo (Clontech), pSVK3, pSVL, pMSG, pCH110, and pKK232-8 (Pharmacia, Inc.), p3'SS, pXT1, pSG5, pPbac, pMbac, pMC1neo, and pOG44 (Stratagene, Inc.), and pYES2, pAC360, pBlueBacHis A, B, and C, pVL1392, pBlueBacIII, pCDM8, pcDNA1, pZcoSV, pcDNA3 pREP4, pCEP4, and pEBVHis (Invitrogen, Corp.) and variants or derivatives thereof. Additional vectors that can be used include: pUC18, pUC19, pBlueScript, pSPORT, cosmids, phagemids, YAC's (yeast artificial chromosomes), BAC's (bacterial artificial chromosomes), P1 (Escherichia coli phage), pQE70, pQE60, pQE9 (quagan), pBS vectors, PhageScript vectors, BlueScript vectors, pNH8A, pNH16A, pNH18A, pNH46A (Stratagene),

pcDNA3 (Invitrogen), pGEX, pTrsfus, pTrc99A, pET-5, pET-9, pKK223-3, pKK233-3, pDR540, pRIT5 (Pharmacia), pSPORT1, pSPORT2, pCMVSPORT2.0 and pSV-SPORT1 (Invitrogen), pTrxFus, pThioHis, pLEX, pTrcHis, pTrcHis2, pRSET, pBlueBacHis2, pcDNA3.1/His, pcDNA3.1(-)/Myc-His, pSecTag, pEBVHis, pPIC9K, pPIC3.5K, pAO815, pPICZ, pPICZ.quadrature.α, pGAPZ, pGAPZ.quadrature.α, pBlueBac4.5, pBlueBacHis2, pMelBac, pSinRep5, pSinHis, pIND, pIND(SP1), pVgRXR, pcDNA2.1, pYES2, pZErO1.1, pZErO-2.1, pCR-Blunt, pSE280, pSE380, pSE420, pVL1392, pVL1393, pCDM8, pcDNA1.1, pcDNA1.1/Amp, pcDNA3.1, pcDNA3.1/Zeo, pSe, SV2, pRc/CMV2, pRc/RSV, pREP4, pREP7, pREP8, pREP9, pREP 10, pCEP4, pEBVHis, pCR3.1, pCR2.1, pCR3.1-Uni, and pCRBac from Invitrogen; .quadrature.λExCell, .quadrature. λgt11, pTrc99A, pKK223-3, pGEX-10T, pGEX-2T, pGEX-2TK, pGEX-4T-1, pGEX-4T-2, pGEX-4T-3, pGEX-3X.times., pGEX-5x-1, pGEX-5x-2, pGEX-5x-3, pEZZ18, pRIT2T, pMC1871, pSVK3, pSVL, pMSG, pCH110, pKK232-8, pSL1180, pNEO, and pUC4K from Pharmacia; pSCREEN-1b(+), pT7Biue(R), pT7Blue-2, pCITE-4abc(+), pOCUS-2, pTAg, pET-32LIC, pET-30LIC, pBAC-2 cp LIC, pBACgus-2 cp LIC, pT7Blue-2 LIC, pT7Blue-2, .quadrature. λSCREEN-1, .quadrature.λBlueSTAR, pET-3abcd, pET-7abc, pET9abcd, pET11abcd, pET12abc, pET-14b, pET-15b, pET-16b, pET-17b-pET-17xb, pET-19b, pET-20b(+), pET-21abcd(+), pET-22b(+), pET-23abcd(+), pET-24abcd(+), pET-25b(+), pET-26b(+), pET-27b(+), pET-28abc(+), pET-29abc(+), pET-30abc(+), pET-31b(+), pET-32abc(+), pET-33b(+), pBAC-1, pBACgus-1, pBAC4x-1, pBACgus4x-1, pBAC-3 cp, pBACgus-2 cp, pBACsurf-1, plg, Signal plg, pYX, Selecta Vecta-Neo, Selecta Vecta-Hyg, and Selecta Vecta-Gpt from Novagen; pLexA, pB42AD, pGBT9, pAS2-1, pGAD424, pACT2, pGAD GL, pGAD GH, pGAD10, pGilda, pEZM3, pEGFP, pEGFP-1, pEGFP-N, pEGFP-C, pEBFP, pGFPuv, pGFP, p6xHis-GFP, pSEAP2-Basic, pSEAP2-Contral, pSEAP2-Promoter, pSEAP2-Enhancer, p.quadrature.βgal-Basic, p.quadrature.βgal-Control, p.quadrature.βgal-Promot[[-]]er, p.quadrature.βgal-Enhancer, pCMV.quadrature.β, pTet-Off, pTet-On, pTK-Hyg, pRetro-Off, pRetro-On, pIRES1neo, pIRES1hyg, pLXSN, pLNCX, pLAPSN, pMAMneo, pMAMneo-CAT, pMAMneo-LUC, pPUR, pSV2neo, pYEX4T-1/2/3, pYEX-S1, pBacPAK-His, pBacPAK8/9, pAcUW31, BacPAK6, pTriplEx, .quadrature.λgt10, .quadrature.λgt11, pWE15, and .quadrature.λTrip lEx from Clontech; Lambda ZAP II, pBK-CMV, pBK-RSV, pBluescript II KS+/-, pBluescript II SK+/-, pAD-GAL4, pBD-GAL4 Cam, pSurfscript, Lambda FIX II,

Lambda DASH, Lambda EMBL3, Lambda EMBL4, SuperCos, pCR-Scrigt Amp, pCR-Script Cam, pCR-Script Direct, pBS +/-, pBC KS+/-, pBC SK+/-, Phagescript, pCAL-n-EK, pCAL-n, pCAL-c, pCAL-kc, pET-3abcd, pET-11abcd, pSPUTK, pESP-1, pCMVLacI, pOPRSVI/MCS, pOPI3 CAT,pXT1, pSG5, pPbac, pMbac, pMC1neo, pMC1neo Poly A, pOG44, pOG45, pFRT.~~quadrature.~~βGAL, pNEO.~~quadrature.~~βGAL, pRS403, pRS404, pRS405, pRS406, pRS413, pRS414, pRS415, and pRS416 from Stratagene and variants or derivatives thereof. Two-hybrid and reverse two-hybrid vectors can also be used, for example, pPC86, pDBLeu, pDBTrp, pPC97, p2.5, pGADI-3, pGAD10, pACt, pACT2, pGADGL, pGADGH, pAS2-1, pGAD424, pGBT8, pGBT9, pGAD-GAL4, pLexA, pBD-GAL4, pHISi, pHISi-1, placZi, pB42AD, pDG202, pJK202, pJG4-5, pNLexA, pYESTrp and variants or derivatives thereof. Any other plasmids and vectors may be used as long as they are replicable and viable in the host.

Please replace paragraph [0167] beginning on page 55, line 26 with the following amended paragraph:

Porcine cells (PCFF4-6) were exposed for 1 hour or overnight to ten-fold serial dilutions of toxin A (0.00001 .~~quadrature.~~μg/ml to 10 .~~quadrature.~~μg/ml). Cells were cultured in 24 well plates and were incubated with the toxin for 1 hour or overnight at 37ºC. The results of this exposure are detailed in Table 2. Clearly, a 1 hour exposure to toxin A at >1 .~~quadrature.~~μg/ml resulted in a cytotoxic effect on >90% of the cells. A concentration of toxin A at or slightly above 1 .~~quadrature.~~μg/ml therefore was chosen for selection of genetically altered cells.